

NORTH CAROLINA WING CIVIL AIR PATROL

U.S. Air Force Auxiliary

Carolina WingSpan

Citizens serving communities: Above and Beyond



AUGUST 2009



**ORANGE CO. COMPOSITE SQUADRON COLOR GUARD
AT DURHAM BULLS GAME**

STORY ON PAGE 9

Carolina Wingspan is a publication of the North Carolina Wing, Civil Air Patrol, Wing Headquarters, P O Box 2082 Burlington, NC 27216-2082. The opinions expressed herein are those of the individual contributors and may not reflect the opinions of Civil Air Patrol or its leadership.

FINAL SALUTE

On behalf of the 141st SAR Composite Squadron -- home unit of Lt Col John D. Workman III -- and the Workman family; I wish to express our appreciation to the many wing members who attended John's visitation and funeral. He would certainly be proud, as are we.

John began his CAP career as a cadet and through the years served as unit CC, Group CC, and was again the unit CC at his untimely death. He served our State and Nation through his volunteer service in Civil Air Patrol for the majority of his short lifetime. His task here is now over, we will truly miss him but feel so blessed to have had him as part of our lives and the CAP family. He was a special person and loved the CAP organization with total dedication.

Our Special THANKS to Capt Paul Twiddy and the cadet honor guard from NC-800 South Charlotte Cadet Squadron for their assistance and a big THANK YOU to the members of NC Wing for your participation in this "OUR FINAL SALUTE" to OUR fallen unit commander. We appreciate it.

Please continue to remember the Workman family with your thoughts and prayers as they continue to deal with their sorrow at the loss of their beloved son, husband and father.

Respectfully,

Lt Col Tom Weber, CAP
141st SAR Composite Squadron

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"Anyone can do the job when things are going right. In this business we play for keeps."

— Ernest K. Gann

Cloudless, not clear From AOPA ePILOT Newsletter



It's a cloudless summer day as you review the weather and prepare to fly. But is it a clear day? The large, stable air masses typical of summer highs can pose other problems. Check for clues. You may see something like this excerpt from a terminal aerodrome forecast: KBGR 291522Z 2915/3012 19008KT 5SM HZ SCT080. The TAF forecasts five miles visibility in haze (HZ) even though the only clouds expected are scattered at 8,000 feet.

Frequently, summer haze is caused by temperature inversions. "Inversion layers are commonly shallow layers of smooth, stable air close to the ground. The temperature of the air increases with altitude to a certain point, which is the top of the inversion. The air at the top of the layer acts as a lid, keeping weather and pollutants trapped below. If the relative humidity of the air is high, it can contribute to the formation of clouds, fog, haze, or smoke, resulting in diminished visibility in the inversion layer," according to Chapter 10 of the [*Pilot's Handbook of Aeronautical Knowledge*](#).

Occasionally, distant sources may lower visibility in ways that that don't fit your picture of the weather. Check pilot reports and don't be caught off guard. "At one point the atmosphere seemed to close around us so tightly that I experienced spatial disorientation and had to refer to the instruments to maintain straight-and-level flight," wrote a pilot about an encounter with restricted visibility that turned out to be caused by smoke from distant forest fires. (See the November 2008 *AOPA Flight Training* "[Learning Experiences](#)" column.)

Another characteristic of hazy conditions is that they tend to be of long duration. "To put it simply, haze is caused by stagnant air—air with no place to go. This stagnation is most often caused by one or more of the following: an inversion, a warm front, or a blockage of an air mass," Thomas A. Horne wrote in "[Wx Watch: Hazy Days](#)."

The lesson: "No clouds" doesn't always mean "no weather." Stay alert to what's out there when you fly.

JoCo Squadron Celebrates 20th Anniversary

Smithfield, N.C.— In May of 2009, the Johnston County Squadron celebrated twenty years of service as a chartered unit of the Civil Air Patrol. The unit, originally chartered as the Johnston County Composite Squadron in May of 1989, later changed its structure to a Cadet Squadron. To celebrate the passing of twenty years of service, the squadron held a celebration dinner and awards ceremony at St. Paul's Episcopal Church in Smithfield, N.C. The event was well attended with a number of distinguished guests including the Honorable N. Leo Daughtry, N.C. House of Representatives, Major General Dwight Wheless, former Civil Air Patrol National Commander, Lt Col Paul Meade, NC Wing Vice Commander, and Major John Kay, Group Five Commander. Lt Col Pat O'Neal, Squadron Deputy Commander performed as Master of Ceremonies, and Lt Col John Barwick serving as Chaplain. At the conclusion of the dinner, an awards ceremony was conducted with four Amelia Earhart awards being presented to Cadets Joshua Rose, Garrett Scott, Nicholas Revels, and Glen Edwards.

The presentations were made by Mr. N. Leo Daughtry and Maj Gen Dwight Wheless. The simultaneous Amelia Earhart presentation to four cadets was a first for the squadron. At the conclusion of the awards ceremony, the squadron performed a cadet commander change-of-command. Now Cadet Captain Joshua Rose accepted cadet command from now Cadet Captain Glen Edwards. Maj Gen Dwight Wheless officiated the cadet change-of-Command. Lt Col Tom Hogg, and Lt Col Donald Beckett, both former squadron commanders were also in attendance.

Article by Lt. Col Don Beckett,
PAO, Johnston Co. Composite Squadron



Back Row, L to R: Cadet Garrett Scott, Maj Gen Dwight Wheless, Cadet Wesley Woodard, Cadet Nicholas Revels, Cadet Joshua Rose, Cadet Gregory Morris. Front Row, L to R: Cadet Andrew Johnson, Cadet Austin Scott, Cadet Glen Edwards, Cadet Daniel Manriquez. Photo by Lt Col Donald A Beckett, Squadron Public Affairs Officer.



Posing with their presented Amelia Earhart Awards: Left to Right: Cadet Joshua Rose, Cadet Glen Edwards, Maj Gen Dwight Wheless, Cadet Nicholas Revels, Cadet Garrett Scott. Photo by Lt Col Donald A Beckett, Squadron Public Affairs Officer.

Cunningham Unit Boasts New Mitchell Cadet

Please join me in congratulating North Carolina Wing's newest Mitchell recipient, C/2d Lt Sophie Rynas of Cunningham Field Composite Squadron.

2d Lt Rynas received the promotion 04 AUG, and the Mitchell ceremony will be held 01 SEP at MCAS Cherry Point. Lt. Col Dan Ellis, Group 3 Commanding, will present the award.

2d Lt Rynas is a rising senior at West Carteret HS in Morehead City. Her parents, Steve and Susan Rynas, are CAP senior members.

Mary Anne Fleagle Maj., CAP
PAO NC-160



Carolina WingTips

Bulldog Unit Receives AFA Grant

I just wanted to let all of you know that the Bulldog Flight is the recipient of the AE grant! I want to give great thanks to C/Col. Jeremiah Coogan for his excellent grant writing, and his initiative in pursuing this opportunity for us!! We are looking actively for the correct projector for the dome and can't wait for an opportunity show it off!

Capt. Terri Zobel

Southeast Raleigh High School Comp. Sqdn.

NC-150 Cadet Promoted to Cadet Captain

C/1st Lt Daniel Kong was promoted to C/Capt and earned his Earhart certificate from Wing Commander, Col. Roy Douglas on Tuesday, August 4th, 2009. The promotion ceremony was performed at the Orange County Rescue Squad building located in Hillsborough, NC.

The Rescue Squad is also home to the Orange County Composite Squadron, NC 150. C/Capt Kong, age 16, has been a CAP cadet since joining at age 12. He currently serves as the Cadet Commander for Orange County Composite Squadron and the Chairman of the North Carolina Wing Cadet Advisory Council. He attended Cadet Officer School at Maxwell AFB last month. Other noteworthy CAP achievements include participating at National Cadet Competition as a member of the MER color guard in 2008, and attending the rigorous Cadet Survival School in California Wing.



L-R: C/Col. Kelly Weeks, C/Capt. Daniel Kong, Col. Roy Douglass.
Article and Photo by: 2nd Lt. Buddy Priest

New VA Wing Commander

Effective 18 August 2009, I am pleased to announce the appointment of Lt Col. David A. Carter, CAP as Commander of Virginia Wing.

Lt Col. Carter is currently the Commander of Fredericksburg Composite Squadron, and has many years of experience to bring to the job. He has held multiple positions at the Region, Wing and Squadron levels, including positions such as Wing Director of Cadet Programs, Wing ES Officer, Commander of three different squadrons and numerous MER special assignments. He is a type one IC with the Virginia Department of Emergency Management and has been involved at the highest levels with CAP's ES partners in the Commonwealth of Virginia.

Please extend a welcome to Lt Col. Carter as the new VA Wing Commander.

Col. Joe Vazquez, CAP
Commander, Middle East Region



Burlington Unit Hosts Cert Training

BURLINGTON, NC (07/29/2009)-The Burlington Composite Squadron of the Civil Air Patrol hosted Community Emergency Response Team training recently at the Burlington-Alamance Regional Airport. This CERT Training prepares teams for disaster response by teaching first aid, triage, basic firefighting, and search and rescue.

The training was held at the Burlington Composite Squadron's headquarters at the airport from 8AM to 5PM on Saturday and Sunday. First Aid and CPR began at 6PM on Friday. Trainers included individuals from the North Carolina Department of Crime Control and Public Safety, the City of Concord Director of Communications, and volunteers from the Civil Air Patrol. 25 people from the area participated in the training.

"CERT Training will prepare emergency responders for what may lie ahead as we move deeper into the hurricane season. It prepares the individual and small groups how to respond within the community when disaster strikes," said Maj Andy Wiggs, Emergency Services Officer from the North Carolina Wing of the Civil Air Patrol. "We're grateful for the volunteers who are leading and participating in this training. Our community's emergency services response will certainly benefit."

KERTIS HENDERSON, Capt, CAP
Public Affairs Officer
Burlington Composite Squadron



A1C Austin Porterfield practices basic fire fighting as his safety partner A1C Jon Pendergraph provides backup.
Photo Courtesy Burlington Times-News.

Orange Co. Team Cleans Up Highway

Command Staff members from NC 150, Orange County Composite Squadron (OCCS), completed their first Adopt-A-Highway (AAH) 'mission' in Orange County on Saturday, August 1st, 2009.

The unit is responsible for cleaning a two mile stretch of Highway in Hillsborough, NC, including Hwy 70A & Hwy 86. OCCS collected over 7 bags of trash and recycleable material (bottles and cans), and helped clean up a major thoroughfare in central Hillsborough.

"Adopt-A-Highway is our chance to give back to the town of Hillsborough, while also promoting volunteer service and helping to increase awareness of Civil Air Patrol in Orange County", says Lt Buddy Priest, Deputy Commander of Seniors at OCCS.

OCCS has plans to do AAH quarterly, and intends to utilize these events to incorporate safety planning & ORM, communications and logistics with their cadets and seniors.

From Adopt-A-Highway North Carolina (NCDOT) Website:

"The Adopt-A-Highway Program (AAH) was established in 1988 by the North Carolina Department of Transportation (NCDOT) in response to growing public concern regarding litter along the state's highways. The AAH Program is administered by the NCDOT Office of Beautification Programs, and is a joint effort between community volunteers and the NCDOT. Its purpose is to decrease the amount of litter on North Carolina's roadsides and improve the beauty and quality of the environment."



L-R: 1st Lt Kathleen Weeks, Deputy Commander for Cadets, and Capt Jeremy Browner, Commander, NC 150. Article and Photo by: 2d Lt Buddy Priest

Cadet Kong Promoted to C/Capt, Receives Earhart Award

By 2nd Lt Buddy Priest
Deputy Commander for Cadets

8/7/2009—Hillsborough, NC—C/1st Lt Daniel Kong was promoted to C/Capt and earned his Earhart certificate from Wing Commander, Col. Roy Douglass on Tuesday, August 4th, 2009.

The promotion ceremony was performed at the Orange County Rescue Squad building located in Hillsborough, NC. The Rescue Squad is also home to the Orange County Composite Squadron, NC 150.



C/Capt Kong, age 16, has been a CAP cadet since joining at age 12.

He currently serves as the Cadet Commander for Orange County Composite Squadron and the Chairman of the North Carolina Wing Cadet Advisory Council.

He attended Cadet Officer School at Maxwell AFB last month.

Other noteworthy CAP achievements include participating at National Cadet Competition as a member of the MER color guard in 2008, and attending the rigorous Cadet Survival School in California Wing.

Outside of Civil Air Patrol, C/Capt Kong is a straight A student at East Chapel Hill High School. He runs cross country and track, plays in the band and is also the captain of the math team. He is also a Boy Scout with Troop 39 in Chapel Hill and achieved the rank of Eagle Scout earlier this year.

21 August 2009
Bagram, Afghanistan

Dear Cadets and Seniors,



Yesterday the people of Afghanistan held their second Presidential election since the Coalition liberated this country from the Taliban eight years ago. The Afghanistan's Election Day was marred by widespread and deadly Taliban attacks, patchy turnout and claims of serious fraud by some of the candidates. But many voters bravely defied the militants' threats and exercised their franchise across the Republic.

I use the term Republic, because that is what the nation of Afghanistan has become - a representative democracy with all the trappings of success and failure that comes with a democratic process. If you think back to our own history, elections have not always been so neat. The 1960 US presidential election, between a little known senator and war hero from Massachusetts and a sitting Vice President and staunch Anti-Communist, also remains a source of debate among some historians as to whether vote theft in selected states aided in President Kennedy's victory. Even as recently as 2000, the Presidential election process was called into question. None-the-less, the system worked; just as it is working here. One other data point to remember – in neither case was a war being fought in the United States during either election. The Afghan's deserve our admiration for attempting to do so in 2009!



Our Afghan and Coalition Soldiers, Marines, Sailors and Airmen were on the front lines yesterday helping ensure the elections were held and protecting the citizens from the evil machinations of the Taliban and Haqqani thugs. These terrorists see free elections, women exercising their right to vote, and a free press as a threat to their outdated and sad devotion to a misguided form of misogynistic politics. Our freedom fighters stood their ground yesterday against these evil miscreants and ensured a free election.

The English economist and philosopher John Stuart Mill wrote, "War is an ugly thing, but not the ugliest of things. The decayed and degraded state of moral and patriotic feeling which thinks that nothing is worth war is much worse. The person who has nothing for which he is willing to fight, nothing which is more important than his own personal safety, is a miserable creature and has no chance of being free unless made and kept so by the exertions of better men than himself."

While many in our nation believe that the war cannot be won, as seen in recent polls by ABC and the Washington Post, it is important to remember we still owe a debt to the 3000 men and women who died on 11 September - a debt that cannot be "voted off the island" or paid with a check to your local charity. To give ground in Afghanistan is both an insult to the dead who have sacrificed in this war and emboldens the enemies of humanity to do their worst. We must accept that nothing less than total victory must be achieved to ensure the future of generations to come.

Live from Afghanistan,

Jayson

Jayson A. Altieri
Lieutenant Colonel
US Army
Bagram Air Base, Afghanistan

Orange Co. Color Guard Commander Reflects on Presenting the Colors at Durham Bulls Game and Child Cancer Benefit

Orange County Composite Squadron's (NC 150) Color Guard presented the Colors at the Durham Bulls game on Saturday, August 8th, 2009.

The game was part of the 1st Annual Strike-Out Childhood Cancer Benefit, which also included fireworks and a concert. The event, sponsored by [Rock Against Cancer](#), brings music to children with cancer.

The opportunity to present the Colors was coordinated by Lt Col. Al Therriault, the North Carolina Wing Director of Cadet Programs. He had this to say of the event, "I am always proud of our cadets, and when I see them helping in the community it is even more special. But when you are stopped in the aisles by the spectators and told how impressive the team and cadets are, it really solidifies the fact that NC has some totally awesome cadets."

Presenting the Colors has become second nature to the Orange County unit, who represented the Middle East Region of Civil Air Patrol at this year's National Cadet Competition in McMinnville, Oregon.

C/MSGT Christina North, 16, the Orange County Color Guard Commander, originally joined the Color Guard for events such as this Cancer Benefit. "When I first joined CAP, I was drawn to Color Guard as a means to give back to my community. My initial goal was to be a part of a team who would present the Colors at sporting and community events", she said.

After two years of being on the team, as a alternate in 2008 and as Commander in 2009, her perspective has matured and evolved into one of representing Civil Air Patrol for what is – a volunteer organization, here to serve our community, state and nation.

"We can enjoy the honor of giving back to the community that has given us so much and I can participate as a member of a team that gives spectators a good impression of Civil Air Patrol", reflects C/MSGT North.

It is this selflessness and sense of duty that Civil Air Patrol cadets have that gives the North Carolina Wing something to be very proud of.

For more information about Civil Air Patrol, visit www.gocivilairpatrol.com. For more information about Rock Against Cancer, please go to <http://www.rockagainstcancer.org/>, or view their press release for the 1st Annual Strike Out Childhood Cancer at http://www.rockagainstcancer.org/documents/AwarenessNightpressrelease_000.pdf.

2nd Lt. Buddy Priest

Deputy Commander for Cadets

Orange Co. Composite Squadron



Photos by 2nd Lt. Buddy Priest



L-R: C/MSGT Matt Harford, C/MSGT Christina North, C/MSGT Dillon Troedsson, C/SMSGT Rebekkah Huss

NTSB Report

Accident occurred Friday, July 17, 2009 in Hayesville, NC

Aircraft: CESSNA R182, registration: N778RK

Injuries: 1 Fatal.

On July 17, 2009, about 0910 eastern standard time, a Cessna R182, N778RK, was destroyed when it impacted trees and terrain near Hayesville, North Carolina. The certificated airline transport pilot was fatally injured. Visual meteorological conditions prevailed, and no flight plan was filed for the flight, which departed Mountain Airpark (0GE5), Cleveland, Georgia, about 0850, and was destined for Andrews-Murphy Airport (RHP), Andrews, North Carolina. The business flight was conducted under the provisions of 14 Code of Federal Regulations Part 91.

According to preliminary information provided by the Federal Aviation Administration (FAA) and local first responders, the accident airplane was scheduled to arrive at RHP around 1045. When the airplane did not arrive as planned, a search was undertaken, and an alert notice (ALNOT) was issued at 1925. The airplane was subsequently located on July 19, 2009, at 1130, near the peak of Shinbone Ridge, within the confines of the Fires Creek Wildlife Management Area.

Review of preliminary radar data provided by the FAA revealed that a visual flight rules (transponder code 1200) target was acquired just north of 0GE5 about 0851. The target tracked generally northbound, until about 0858, when it turned about 30 degrees left, directly toward RHP. The target gradually descended from 5,600 feet to 4,700 feet, where the last radar target was observed about 27 nautical miles southeast of RHP.

The accident site was located about 6 nautical miles east of RHP, at an elevation of 4,667 feet. The initial impact was in trees, and the treetops were cut off at an angle that was parallel to the horizon. The horizontal distance from the first tree strikes to where the main wreckage came to rest was about 50 feet. Significant portions of the wreckage were consumed by a post-impact fire.

The outboard 4 feet of the left wing was lodged in a tree, near the first tree strikes along the wreckage path. The inboard portion of the left wing was located at the base of a tree about 20 feet beyond the outboard portion. The wing exhibited a concave depression oriented roughly perpendicular to the leading edge, and was consistent with the size and shape of the tree where the wing was found. The fuselage was located about 10 feet beyond, and to the right of, the inboard portion of the left wing. The right wing remained attached to the fuselage and was wrapped around a tree about 8 inches in diameter. The fuselage was heavily fire-damaged aft of the firewall.

The empennage was separated from the fuselage, and came to rest about 5 feet prior to it along the wreckage path, and exhibited fire damage. Measurement of the elevator trim actuator jack-screw revealed that it correlated to a 12-degree tab up (nose down) position.

Control cable continuity was traced through separations consistent with overload separation, from the cockpit area to all flight control surfaces. Examination of the flap actuator revealed a measurement consistent with the flaps up position. The nose landing gear actuator was fully extended, consistent with the landing gear up position, and the main landing gear remained attached to the fuselage, and exhibited minimal impact damage to their front facing surfaces.

Most of the cockpit instrument gauge faces were burned and unrecognizable, with the exception of the altimeter. The hundred-foot increment needle was missing, however the thousand-foot increment needle was positioned to roughly 4,700 feet. The ten-thousand-foot needle was rotated to roughly 25,000 feet. The altimeter setting window displayed about 29.98. Hand rotation of the vacuum pump input shaft produced suction at the inlet and pressure at the outlet.

The engine was undamaged by fire, and remained largely intact. The right portion of the crankcase inboard of cylinder number 2 was fractured consistent with impact. Continuity of the engine crankshaft was confirmed from the propeller flange to the rear accessory gears. Valvetrain continuity was confirmed, and rotation of the crankshaft produced compression on all cylinders. Examination of the top six spark plugs revealed light gray deposits and normal wear. The dual magneto was rotated by hand, and all towers of the left magneto produced spark. The right magneto could not be operated due to impact damage

The oil screen and oil filter were examined, and found absent of debris.

The fuel sump contained a trace amount of fuel, and its screen contained a trace amount of debris. The fuel pump was removed from the engine and actuated by hand, with no anomalies noted. The electric boost pump screen contained a trace amount of debris. The carburetor float bowl contained a small amount of fuel, and trace debris.

The propeller separated from the engine at the propeller flange. Both propeller blades exhibited aft bending at about one quarter of their span, and forward bending near the outboard quarter of their span. The tip of one of the blades was curled aft, and slight leading edge gouging was observed on the opposite blade.

Review of maintenance records provided by the operator revealed that the airplane's most recent annual inspection was completed February 23, 2009, at 4,807 total hours of operation. The airplane's most recent altimeter system check was completed on October 22, 2008. The operator also stated that the airplane was being returned to their operations base for a propeller governor overhaul that was due on July 31.

According to FAA records, the pilot held an airline transport pilot certificate with numerous ratings including airplane single engine land, as well as a flight instructor certificate with numerous ratings including airplane single engine, and instrument airplane. The pilot possessed 20,000 total hours of flight experience, and his most recent FAA second-class medical certificate was issued on February 19, 2009.

Andrews-Murphy Airport (RHP), was located about 6 nautical miles northwest of the accident site, on the opposite side of Shinbone Ridge, at an elevation of 1,697 feet. The runway was oriented in a 08/26 configuration, and the airport was served by a single area navigation/global positioning system approach to runway 08. The minimum descent altitude for the approach was 4,020 feet above mean sea level (2,329 feet above ground level).

The 0853 reported weather at RHP included an overcast ceiling at 1,200 feet, 7 statute miles visibility, winds from 260 degrees at 9 knots, temperature 23 degrees Celsius (C), dewpoint 21 degrees C, and an altimeter setting of 29.97 inches of mercury.



Editor's Note: NCWG committed six aircraft and nearly 40 volunteers to this mission (See July 2009 Carolina WingSpan).

THE ONLY FLAG THAT DOESN'T FLY

Between the fields where the flag is planted, there are nine+ miles of flower fields that go all the way to the ocean. The flowers are grown by seed companies. It's a beautiful place, close to Vandenberg AFB. Check out the dimensions of the flag. The Floral Flag is 740 feet long and 390 feet wide and maintains the proper Flag dimensions, as described in Executive Order #10834. This Flag is 6.65 acres and is the first Floral Flag to be planted with 5 pointed Stars, comprised of White Larkspur. Each Star is 24 feet in diameter; each Stripe is 30 feet wide. This Flag is estimated to contain more than 400,000 Larkspur plants, with 4-5 flower stems each, for a total of more than 2 million flowers.

Submitted By Maj. Linwood Dabney



NC Wing Members Market CAP to County Sheriffs

By Maj John Maxfield
NC Wing Legal Officer

7/28/2009—Raleigh, NC—NC Wing members established an exhibition booth at the North Carolina Sheriffs' Association Training Conference in Raleigh on July 28, 2009. The purpose of the exhibition was to educate the elected sheriffs in North Carolina about what CAP could do for them and their agencies including the CAP Counterdrug Program.

A number of the sheriffs in attendance took the time to stop and talk with the CAP members manning the booth and a large amount of literature, including a special North Carolina Wing edition of CAPabilities, was presented to the lawmen. Many of the sheriffs stated their surprise at the many missions CAP performs and expressed an interest in learning more about Civil Air Patrol in North Carolina. CAP members interacting with the sheriffs at this conference were Col. Larry Ragland (former NC Wing Commander), Lt. Col. Jeff Willis (NC Wing DO), Maj. John Maxfield (NC Wing Legal Officer) and Maj. Dion Viventi (Former Commander, Raleigh-Wake Composite Squadron).



NC Wing Members Staff CAP Exhibit. L-R: Lt. Col. Jeff Willis. Maj. John Maxfield, Col. Larry Ragland. Photo supplied by Col. Larry Ragland

The Pitot-Static System - Can you sketch it from memory?

From "Over The Airwaves" by Bob Miller, CFII

It's a remarkably simple system but, surprisingly, few of us can sketch it out on a pad or explain its curious functions. Do you know where the word "Pitot" comes from???

Let's take a quick look at one of the most important systems found on any aircraft.

First . . . its origin.

Back in 1732, a hydraulic engineer named Henri Pitot (1695-1771) was asked to measure the flow of the River Seine. To calculate the speed of the current, he developed a tube with a 90-degree bend. When placed in a flowing liquid vertically with the open end directed upstream, the rate of flow could be calculated based on the height of the liquid filling the vertical part of the tube.

This discovery led to Mr. Pitot's appointment to the French Academy of Science. And now you know why the word "Pitot" is always capitalized!

What does the Pitot tube do?

As all primary student pilots are taught, the Pitot-static system is an air pressure measuring device. Ram air is captured by the Pitot tube which, in turn, applies pressure to a delicate membrane inside the airspeed indicator. The greater the air pressure, the more this membrane is deflected and the higher the airspeed reads on the gauge.

Simple, right? Be careful here. Lots of things can cause erroneous pressure readings. How about altitude? Air gets less dense (less pressure) as we climb. How about temperature? This changes air density as well. What about the angle of the Pitot tube to the relative wind? Whoa! There's a big effect here. What about an insect or ice caught inside the Pitot tube? Yep . . . bad (or no) reading.

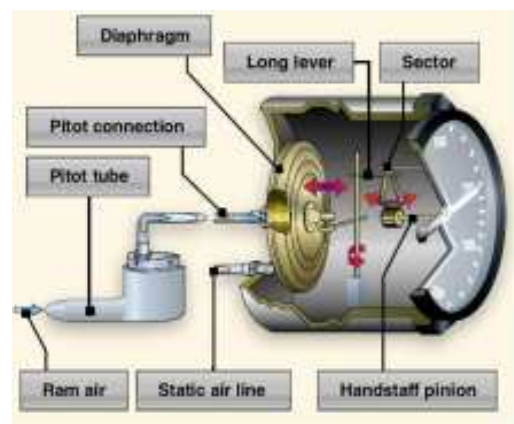
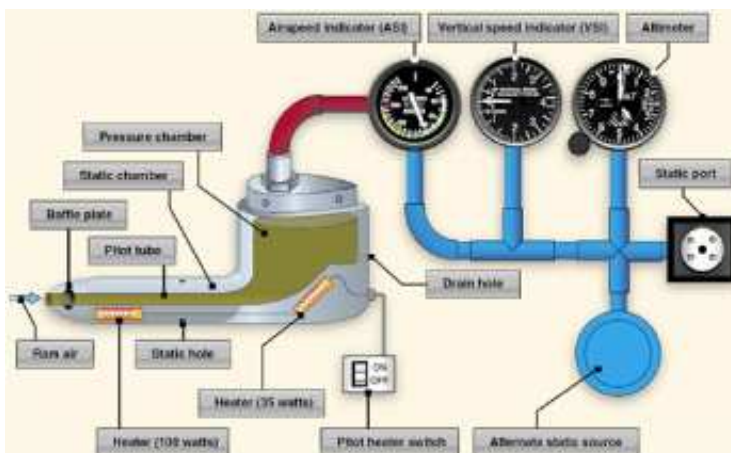
And the static port?

The static side of the Pitot-static system is much more basic. The static port simply measures ambient air pressure outside of the aircraft. The higher we go, the less ambient air pressure is noted.

So what could go wrong with the static port?

Answer: Usually nothing! But then again, Mr. Murphy occasionally comes to visit. For example, a compulsive neat-freak pilot might be inclined to place a piece of tape over the static port before washing or waxing his airplane. While a good idea in theory, the hapless pilot MUST remember to remove this tape before flight!

As said above, the Pitot-static system is important. Without it, we cannot determine our airspeed, altitude, or rate of climb or descent. As such, all of us need to know and understand its inner workings!



Cunningham Field Comp. Squadron Flies C-130J, Lives to Tell About It

by Mary Anne Fleagle Maj., CAP

Cunningham Field Composite Squadron

18 AUG 2009



Cadets and senior members of Cunningham Field Composite Squadron spent the evening of 09 August in what might be considered the “world’s most expensive video game.” Led by Maj Madison Crum, CAP, the members trained in the C-130J simulator aboard MCAS Cherry Point, the squadron’s home base. The simulator is part of the Aircrew Training Unit (ATU) at MCAS Cherry Point, where Maj. Crum is an instructor.

The mission of the ATU is twofold. Headed by LtCol Steve Treichel, USMC, the ATU trains initial replacement pilots for service in the fleet Marine Forces. The ATU also trains experienced aircrew for combat missions in locales throughout the world. These missions include aerial refueling, low-level navigation, aerial delivery and assault landing zone operations.

The ATU uses the 2F199 Weapons System Trainer. This is a full-motion simulator that contains an exact replica of the KC-130J model cockpit with 180 degree wrap-around visuals. It has the capability to simulate any weather, and numerous emergency and standard flying procedures.

In the words of Maj (CH) Ed Fleagle, CAP, an instrument rated private pilot, the C-130J simulator makes instrument approaches “intuitive, and much easier than approaches in aircraft with basic instrumentation.” Maj. Fleagle logged five instrument approaches and said each one was easier and smoother than the previous one. Capt. Stewart Sibert, who is Ensign Sibert, USCG, during work hours, became the first squadron member to take the simulator acrobatic, performing a successful barrel roll at 3000’.

Cadets and the younger senior members trained in basic flight maneuvers. Senior members Kelsey Weber and Alicia Koylu hope to fly jets for the USAF. Will the regular dates that the squadron keeps with the C-130J simulator change their minds about their aircraft of choice? “Maybe!” they stated. The squadron cadets are becoming more and more familiar with the C-130 cockpit, and welcome the challenges of flying the aircraft right down to the ground.

Maj. Madison Crum of Cunningham Field, is a retired Marine with 3000+ flight hours. He has flown the T-34, T-2, TA-4, OV-10 and the venerable KC-130. He has worked at the ATU since its inception in 2005. Prior to that, Maj. Crum taught History at Havelock High School and was an instructor in the previous KC-130R model simulator.



C/A1C Bethany Riley

C/CMSgt Rosemary Ellis

C/SMSgt. Jim Lukscza

Photos By: Lt. Col Dan Ellis

Quarterly Commander's Call Features Change of Command, Promotion and Awards

August 8, 2009

Burlington, NC – The day began at 9:00 a.m. with a closed meeting attended by Col. Roy Douglass and the wing's five group commanders. The thrust of this gathering was to work out a more flexible positioning of the wing's ten aircraft to permit more squadrons to have greater access.

At 11:00 a.m. the general assembly commenced with a change of command in Group 2. Major Toby Wall passed the ceremonial guidon to Maj. Max Nouredine. Wall was thanked for his service as Group Commander for more than three years.

Next on the calendar was the promotion of Capt. Dan McCollum to the rank of major. Maj. John Kay, NC Wing Chief of Staff, assisted. Col. Douglass noted that McCollum was recently named National Safety Officer of the Year. McCollum is currently serving as NC Wing Safety Officer. The NC Wing recently received the 2009 Paul W. Turner National Safety Award.

1st Lt. Jim Thomasson, wing personal development officer, gave the background of the Paul E. Garber Award. "The Garber Award recognizes the completion of CAP's level four training accomplishments. Only a small percentage of CAP members ever reach this accomplishment," Thomasson said. Douglass then presented the Garber Award Maj. Glen Peting.

Maj. Toby Wall was then recalled to the dais and Douglass presented him with the Outstanding Service Award for his many years of devoted service to the NC Wing.

Following a short lunch break, the meeting resumed with all five group commander's meeting with their respective commanders and other members of their units to discuss general plans for the balance of the year. The group commanders reminded their unit commanders to promote the upcoming NC Wing Conference in October.



L-R Col. Douglass, Maj. Wall,
Maj Nouredine



L-R Maj. Kay, Maj. McCollum, 1st Lt
Thomasson, Col. Douglass



Outstanding Service, L-R: Maj. Wall.
Col. Douglass



Garber Award, L-R Col. Douglass,
Maj. Peting

Photos and Article by Capt.
Don Penven

Aerospace Day Saturday, Oct 3rd, 2009 Burlington HQ

Rockets O-Rides A/E Quizzes GPS –NAV

Cadets,

Bring your rockets-Study the test. You can be signed off on the hands on, the written and module # 4 on both the Titan and Saturn stages of the rocket program. A testing officer will be available. We will offer cadet o-rides all day (weather permitting).

Have fun; test your knowledge and skills in the A/E and Navigation competitions.

Lunch - Six dollar (\$6.00) tickets will be sold at check in (pizza and soft drinks) or you may go out.

Officers:

We need to know if you are coming and how many Cadets you are bringing and if you will be driving a CAP van. Please respond even if you are not coming.

The Uniform for Cadets is BDU's. Bring your CAPF-60 and ID Cards

AGENDA

Time	Activity	Duty Officer
07:30	Sign in desk opens	Admin
08:00	Post the colors	Ranking Cadet
08:30	Pledge / prayer	Ranking cadet / Chaplain
Opening Remarks	CS and DAE	
Safety Brief	Open	
DDR Talk	Open	
0900-1300	Model Rocketry Events	Major Williams
1200-1300	Lunch	open
1300-	A/E Competition-Based on Journey of Flight and Aerospace Dimensions	Capt. Twiddy
	GPS Hunt Competition	Open
0900-1600	O-rides	

DAE Ptwiddy@comporium.net
DDAE JPBTW@carolina.rr.com



Advanced Mountain Fury Training

Asheville Squadron will conduct an advanced Mountain Flying training 10-11 October at Asheville Regional Airport (KAVL). This training will be different from other training conducted in the past few years in that this will be an advanced course.

Participants: Only NCWG and Aircrew * who have previously attended AVL Mountain Fury course (* MO/MS personnel not previously attending MF will be flown at the option of the AOBD).

Aircrews will be assigned designated mountain area Grids to conduct visual, ELT, contour, parallel track, expanding square searches, and photo recon. Two ground teams will be available for A/G coordination/direction to find select crash sites. No AVL IP's are planned to be used and Aircrews will be asked to provide personal assessments of crew performance at the debrief.

Be prepared for initial tasking at 08:00L on 10 October. Crews will be evaluated on preflight prep/time from assignment to T/O completeness of planning, crew performance utilizing assigned aircraft equipment, operational communications, target location, and photo quality.

Inbound flights will be handled by Lt Col Ray Davis (AOBD).

Participants should submit a Form 17 to Lt Col Bob Bauer prior to 30 Sept 09 at vonbauer@bellsouth.net. Any questions should be directed to Lt Col Bauer at vonbauer email address or phone 828-273-1887 or cell 828-684-7572.

Hotels are available near the airport or in nearby Asheville. I will be sending out a list of motels in the next two weeks and we will supply transportation to and from the airport. Other than the cost of hotel and meals the cost will be very little mostly for lunch being supplied by Asheville Squadron.



Emergency Services Training, Virginia Style

By: Lt. Col. Don Beckett, PAO, Johnston Co. Composite Squadron

Under Commonwealth of Virginia statute, persons under the age of sixteen may not participate in SAR work as a Field Team Member (GTM), nor under the age of eighteen as a Field Team Leader (GTL). Virginia Wing, CAP has struck a reasonable balance with the requirement. According to Lt Col David Carter, the school commander and now the newly appointed Virginia Wing Commander, VA Wing, with the assistance of the Virginia Department of Emergency Management (VDEM), and with support from Middle East Region, puts on the Ground Search and Rescue School (GSAR) school once a year, allowing cadets under the age of 16 and 18 to participate. Underage but successful graduates receive a letter of completion from the State of Virginia that can be submitted once the cadet reaches the proper age, and become certified by Virginia in the respective specialty.

This year's school, held in April and May, had three cadets participate in the very demanding Field Team Leader (FTL) course. Four members of the North Carolina Wing trekked to Virginia to attend the school, held over two intensive weekends at the Pocohontas State Park southwest of Richmond. Attending were Lt Col Donald Beckett from the Johnston County Cadet Squadron, and Capt Paul Twiddy with Cadets Micah and Sierra Larson from the South Charlotte Cadet Squadron. The school began on Friday evening with staff introductions, a safety briefing, which will bring special importance later, and a comprehensive written, 100-question pretest.

On Saturday, instruction began promptly at 0800 and continued at an intensive pace all day. Classroom topics included Roles and Responsibilities of the Field Team Member (Virginia's equivalent to CAP's Ground Team Member), Legal Aspects of Search and Rescue, SAR Operations, SAR Resources, Search Strategy and Tactics, Clue Awareness, and Incident Procedures. Field exercises that included intensive line-searching and litter-handling sessions, followed the SAR Strategy and Clue Awareness sessions. The school also offered Basic Communications User Training after the regular sessions for those that needed it.

Field exercises resumed on Saturday evening after dinner with a number of practical missing person exercises and finally wrapped up around 0100 with most not hitting the rack until 0200. Safety became clearly an important issue with the heat and aggressive hydration, but also with ticks and the problems they can bring. Some students reported anywhere from 10 to 30 ticks being found both outside and under clothes. Ticks were able to penetrate blousings and were found not just under the boots, but under the socks, embedded in ankles, well below the rim of the boots. These ticks were particularly small and able to penetrate the fabric weave.

The school this year had a total of forty-one students and staff. Classroom sessions were held in the multi-purpose building while students and staff slept in rustic, minimal cabins in the Algonquin Ecology Camp constructed in the thirties by the Civilian Conservation Corps. The CAP GSAR school has been supported by the State of Virginia for ten years, with this year's school being the tenth year. Since the school is open to all, it was fortunate that there were two canine handlers enrolled as well and they brought a unique perspective to the school. Now Colonel Carter states he was very impressed with the quality of this year's students.

The school has always been held over two intensive weekends, which originally started in 1977. Many of the standards the State of Virginia developed for their standards originally came from Civil Air Patrol. In order to complete the intensive course, a comprehensive battery of tests was administered. A 100-question written exam, a practical ropes/knots test, and a practical map reading test. For those who successfully completed all exams, the State of Virginia mailed the requisite certification credentials out, and the School Commander provided the requisite documentation for the respective CAP credentials.

Photos By: Lt. Col. Don Beckett



Far right - Cadet Larson, South Charlotte Cadet Squadron and Field Team Leader Candidate, directs her team during stokes basket transport training around, over, and under various obstacles. Capt Paul Twiddy, South Charlotte Cadet Squadron, is the 'patient', in the basket.



Left - Capt Twiddy, South Charlotte Cadet Squadron and Field Team Leader Candidate, works with other FTL students preparing a stokes basket for patient transport. Cadet Larson, South Charlotte Cadet Squadron is in the basket as a 'patient'.

New Brunswick County Flight quickly gains members and conducts air operations.

2nd Lt. Steve McMillan, Public Affairs Officer
Cape Fear Composite Squadron

Oak Island, NC – The North Carolina Wing of the Civil Air Patrol (CAP) has established a new unit at the Brunswick County Airport in Oak Island, NC. Under the command of Lt. Col Dennis Faver, the Brunswick County Flight's initial open house netted 12 senior members (many of whom are pilots), and seven cadets. In conjunction with Wilmington's Cape Fear Composite Squadron, the Flight has also conducted ten cadet orientation-ride sorties from the Brunswick County Airport in the last two weeks.

Retired from the U.S. Army, Lt. Col Faver is a flight instructor for Red Sky Aviation at the Oak Island airport. The airport director provides meeting space and ramp services as a courtesy for the new squadron.

The impressive response from the community shows the area's strong support for the Civil Air Patrol and its role in providing positive opportunities for teens in its cadet programs; its Search and Rescue operations; and the Aerospace Education programs provided for both teens and seniors.

With its airport access, the new Flight will provide a tangible role in coordinated ground and aerial search and rescue missions for the North Carolina Wing's southeast region.



Lt. Col Faver and cadets conduct interior preflight



Lt. Col Faver and cadets preflight exterior

Photos by 2nd Lt. Steve McMillan

ARCHER Training Offered at RDU

An ARCHERTrac Training Course is scheduled for 11-13 Sep 2009, to be held at the Raleigh-Wake Sq HQ at the General Aviation Terminal at Raleigh-Durham International Airport. Classroom training will be held beginning at 1800 on Friday evening and will continue on Saturday morning with flight operations scheduled for Saturday afternoon and Sunday morning. You must attend all classroom sessions, successfully complete all exercises, pass a written test and successfully complete the flying portion of the training (practical exam) to receive credit for this course. This course will be intensive, with a minimum of 7 hours of classroom work including hands-on exercises and the written exam plus a minimum of 1 hour of flying per student.

This course is open to Senior Members, who are currently qualified as a Mission Observer or Mission Scanner, with preference given to Mission Observers. The purpose of this course is to train and qualify ARCHERTrac operators, to serve as part of an ARCHER system aircrew. The ARCHERTrac operator is a key member of an ARCHER crew and is responsible for directing the pilot, in coordination with the ARCHER Operator, to insure 100% sensor coverage of the specified search area. Due to the requirement for 1 hour minimum per student in the ARCHERTrac position in the GA-8 Airvan, this course will be limited to 6 students, with 2 alternates. Every effort will be made to permit the alternates to fully complete the course including the flying portion, however priority will be given to the six primary students.

The requirements for selection to attend this course are as follows:

- Must be a current Mission Observer or Mission Scanner, with preference given to Mission Observers
- You must be extremely computer literate, and preferably have significant experience using tablet PC type devices and are comfortable with stylus pointing devices
- You must not be prone to airsickness - you will be operating "head down" for much of each sortie flown
- Must have recent demonstrated mission participation as a Scanner or Observer
- Must be willing to make yourself available for potentially long deployments, in excess of 5 days and be self-sufficient during such deployment
- Must provide own laptop/tablet device for the classroom exercises. This must be a modern laptop/tablet running Windows XP or equivalent (No Macs) with a minimum of 1GB of RAM and at least 1GB of hard drive space available for required files.

To be considered for selection for this course you must submit a E-FORM CAPF17 through your chain of command to be received by me, NLT Friday 28 August 2009. Failure to properly follow this instruction will result in non-selection for this course. There will be a \$22.50 fee for materials (course manual, thumb drive with software) and incidentals - do not send money until you have been confirmed as a student or alternate. Payment instructions will be provided at a later date.

Contact me directly with any questions that you may have.

DAVID E CRAWFORD, Lt Col, CAP
Senior Incident Commander
North Carolina Wing

